

RUSSIAN LITERATURE AND ACCESS TO ITS ENORMOUS MATERIAL

Dr.V.A.Markusova

Dr.V.Tsvetkova

All Russian Institute for Scientific and Technical Information

Ulitsa Usievicha 20, 125219 Moscow, Russia

E-mail: viniti@online.ru

Abstract: The paper discussed the fact that the huge amount of Russian literature is unknown to Western scientists. This statement was confirmed by the result of analysis of two comprehensive database (DB): Science Citation Index (SCI) DB in 1993-96 and DB of grant holders of Russian Foundation for Basic Research (RFBR). The best sources to Russian literature are Journal Abstracts and a database in all fields of natural and applied sciences, which is produced and published by All Russian Institute for Scientific and Technical Information (VINITI). VINITI database is more reliable and comprehensive tool, which provides access to any kind of Russian publications: papers, gray literature, patents, books, conference proceedings, pamphlets, etc. It contains more than 15 million records since 1981.

Each year VINITI DB includes about 1 million records and Russian publication are 25% of them. The files of "Geology," "Geography," and "Environmental Science" include about 40% of Russian publications.

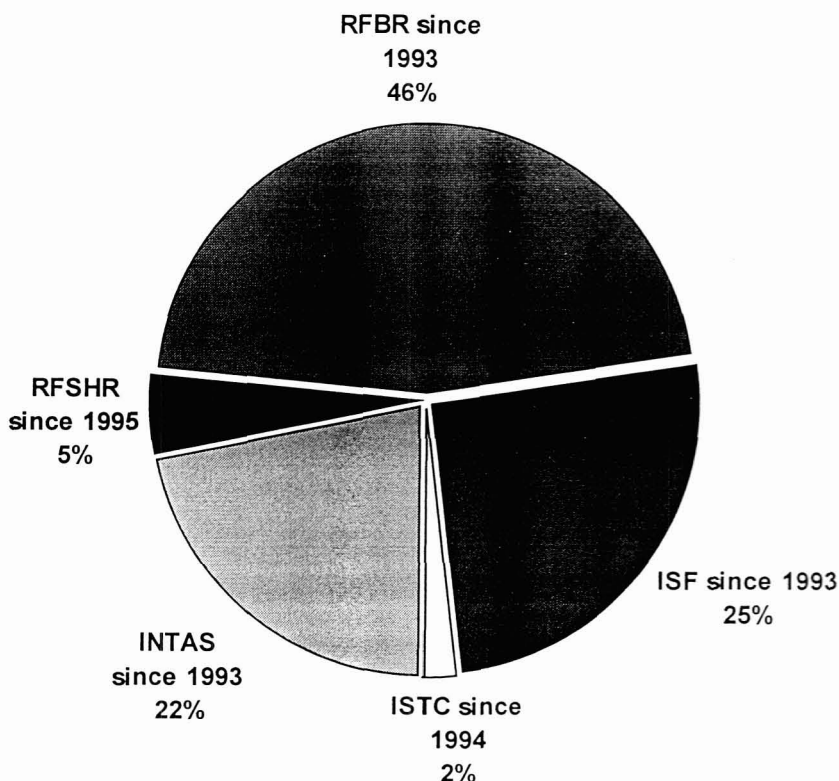
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A review published in *Science* in 1993 considered the state of science in the former Soviet Union (FSU). It emphasized that "the state of research has never been more grave than during last year. Scientists are forced now to compete for resources against other arguably more urgent needs, such as economic reform and social welfare, in a fragmented and chaotic political environment". The conclusion of this review is that research in FSU has a future, but the government had to take measure to persuade the best scientists to stay in science. We can state now that despite instability and economic problems Russian science survived and Russian scientists continue to make a great contribution to world science.

A few years ago, there was a major reform involving funding allocations in Russia. The appearance of different independent funding agency supporting basic research is a new stage in the development of science in Russia. First, in 1992 the government of Russia created the Russian Foundation of Basic Research (RFBR). RFBR is the organization that implements the principles, which are standard for the world scientific community but essentially new for our country. It introduces the concept of competition, based on strict review, and transfers the final decision about support for research to the hands of scientists themselves. At the same time the opportunities to submit applications for grants

to foreign funding organizations were opened. An unprecedented event in the scientific community of FSU was the allocation, by American businessman G. Soros, of \$200 million to support basic research in the FSU. The International Science Foundation (ISF) was created in Moscow to organize distribution of grants funded by G. Soros. During the period 1993-96 research support by ISF was \$66.5 million by ISF and \$121.1 million by RFBR. The support of Russian science by different funding agencies is shown in the fig.1

**Fig. 1. The support of Russian science
by different funding agencies
1993-1996**



This paper is a part of the project which has as objectives: (1) to characterize scientific research activities of institutions co-funded by ISF and RFBR during the period 1993-96;

(2) to identify and describe the nature of collaborative work involving scientists in Russia and in the West; (3) to analyze the distribution of funding and resulting research productivity among diverse geographic regions of Russia; (4) to characterize differences between science supported by domestic funding and that funded by international grants (5) to assess the impact of grants on the development of collaboration, publication, citations and citation impacts of the funded research (supported by INTAS project N 96-0036).

The RFBR database, which includes information about grant recipients in 1993-97, provides a unique opportunity for a bibliometric study about science in Russia. The information in the database came from grant recipients. The database also includes full information about the funded project, address and name of the organization where research was done, the name of funding agency and the type of the organization (research institute or educational organization).

We have a strong belief that the results of competition for funding give the real picture of what is working in science and which institute and research team should be supported by scarce funds.

The RFBR database contains information about 11,665 research projects and 1,250 organizations. It allows searching by field of science, to trace the best scientific groups and organizations, to evaluate the performance of scientists, their contribution to the world science. The search by organization shows a new type of small enterprise, which appeared in "perestroika" time and are competitive in research with well-known organizations. The appearance of these small enterprises in the list of organizations reflects the behavior of researchers and the adaptation of the scientific community to the new economic conditions.

During 1993-97 RFBR distributed more than:

- 290 individual grants for the research related to Arctic study;
- 7 grants to produce the database related to Arctic study; (as an example, snow and ice resources of the Asian continent, etc.)
- 16 grants to publish books;
- 26 to support expeditions.

The distributions of grants devoted to Arctic study by field of science follows:

Biology - 36.0 %

Earth Science - 61.5 %

Social Science - 2.5 % (minorities on North of Russia, etc.)

One of the conditions of RFBR policy is that grant holders have to publish the results of the research supported by RFBR. According to the evaluation of editor-in-chief of the journal *Petrology*, Prof. O. Bogatkov about 80% - 90% of the papers published in 1995-96 have reflected the results of research supported by RFBR. About 50 - 60% of papers

in the Russian journal *Geochemistry* were related to the research supported by RFBR. To evaluate the impact of grants on information output, the reports submitted by grant holders to RFBR in 1996 were studied. Usually the duration of grant was two years and it there is at least a one-year lag before the paper was published. We found out that in 1996 6,500 grant holders have published more than 54,000 papers. Only half of these publications were covered by Science Citation Index database (SCI).

SCI is used by scientometricians for statistical analysis. To demonstrate the contribution of Russian science to world information flow we traced the performance of Russia as reflected in SCI during the years 1993-96. Russia was in seventh place among 102 countries according to the number of papers - more than 22,000. In 1993, 94 Russian journal titles were covered by SCI. In 1995 the number of Russian journal titles covered dropped to 71 (a decrease of 25%). However, the number of paper did not change: 22,327 in 1993 and 22,310 in 1996. This fact allows us to draw the conclusion that a huge amount of Russian literature is unknown to Western scientists.

All Russian Institute for Scientific and Technical Information (VINITI), the country's central information institute, is a well-known multidisciplinary information service which produces and publishes 26 Journal Abstracts (JA) in all fields of natural and applied sciences. Since 1981 VINITI produced and maintained a database (DB) and set up an on-line service for users in Russia as well in other countries. DB VINITI is only one more reliable and comprehensive tool, which provides access to any kind of Russian publications: papers, gray literature, patents, books, conference proceedings, pamphlets, etc. It contains more than 17 million records since 1981. Each year VINITI DB includes about 1 million records and about 25% of them belong to Russian publications. The files of "Geology," "Geography," and "Environmental Science" include about 40% Russian publications.

Using VINITI DB, specialized information on a variety of subjects can be compiled according to a user's request. Backfiles - available for 1981 through 1997 - allow retrospective searching of Russian publications. Varieties of formats (CD-ROM, diskette, and network) are available. VINITI continues the cooperation with partners working in New Independent States (NIS) and includes in its database the publications from these countries. VINITI's products continue to be the main source of information for scientists working in the New Independent States of the former Soviet Union.

All request for copies of any kind of Russian literature should be sent to:
PIKVINITI@COMDEL.RU

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